ATTACHMENT 6

AEC - Q200 - 006 - REV A

TERMINAL STRENGTH (SMD) / SHEAR STRESS TEST
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METHOD - 006
PASSIVE COMPONENT
Terminal Strength (SMD) / Shear Stress Test

1.0 SCOPE:

The purpose of this test is to verify that the component terminations can withstand axial stresses that are likely to be applied during normal manufacturing and handling of a finished printed circuit board (PCB) assembly.

1.1 DESCRIPTION:

This test is designed to evaluate the strength of the solder bond between terminations/leads of a surface mounted device and a specified copper pattern on glass epoxy circuit board.

1.2 Reference Documents:

None.

2.0 EQUIPMENT:

Unless otherwise specified, the SMD shall be tested while mounted onto a .062 inch thick FR-4 PCB using 1 ounce of Copper. The Supplier shall use the preferred pad layout for the device being tested. The Supplier shall provide parts placed and reflowed on the test coupon and provided as part of the qualification package. (See Figure 1 below)

2.1 Test Apparatus:

See Figure 1.
3.0 TEST PROCEDURE:

With the component mounted on a PCB obtained from the Supplier with the device to be tested, apply a 17.7 N (1.8 Kg) force to the side of a device being tested. This force shall be applied for 60 + 1 seconds. Also the force shall be applied gradually as not to apply a shock to the component being tested. (See Figure 1)

![Figure 1](image)

Magnification of 20X or greater may be employed for inspection of the mechanical integrity of the device body, terminals and body/terminal junction. Before, during and after the test, the device shall comply with all electrical requirements stated in this specification.

3.1 Sample Size:

The total number of components and lots to be tested is listed in Table 1 of AEC-Q200 specification.

3.2 Pre and Post-Measurement:

Visual and Electrical characterization of devices are to be performed at room temperature per device specification.

4.0 FAILURE CRITERIA

The failure criteria are governed by not meeting the device specification, along with evidence of cracking or part being sheared off from its pad.
## Revision History

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<td>-</td>
<td>February 15, 2005</td>
<td>Initial Release.</td>
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<td>A</td>
<td>June 1, 2010</td>
<td>Notice Statement (Page 2) Added. Format Updated.</td>
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